



# RX-V3800BL

7.1-Channel Digital Home Theater Receiver

NEW  
PRODUCT  
BULLETIN

A high-end Home Theater Receiver introducing new technologies and features including 3D CINEMA DSP, latest HDMI 1.3a specification support, upscaling to 1080p, full support for high definition audio format signals, Adaptive DRC and Adaptive DSP Level, and Network Receiver functions.



**Oil-Damped Hidden Control Panel** includes USB port, Aux input terminals, Main/Zone 2/Zone 3 power on/off switches, rec out/Zone 2 selector, YPAO optimized microphone jack, and more.

**Direct-access (macro-command, learning and preset capable) remote unit with illuminated buttons (right) and dedicated zone remote unit (left)**



## 1 High Sound Quality

- 7-channel 980W powerful surround sound (140W x 7)
- HD audio format signals capability: Dolby Digital Plus, Dolby Digital TrueHD, DTS-HD High Resolution Audio and DTS-HD Master Audio
- Digital Top-ART with superior audio-grade parts and devices used throughout
- Pure Direct for higher fidelity sound reproduction
- Burr-Brown 192 kHz/24-bit DACs for front channels and 192 kHz/24-bit ADC for Main Zone

## 2 High Picture Quality

- Analog video (480i or 480p) upscaling to full HD 1080p
- Latest HDMI 1.3a (4 in/1 out) specification supports with Deep Color (30/36 bit) transmission, 120Hz and 24Hz Refresh Rates and Auto Lip-Sync compensation
- Analog video to HDMI digital video upconversion with TBC

## 3 Advanced Features

- Network Receiver functions (Internet radio, PC music files, USB portable audio players and flash drives, MusicCAST)
- XM ready with XM HD Surround powered by Neural-THX Surround decoder
- iPod compatibility via optional Yamaha YDS-10
- Improved YPAO short-cut setup function and System Memory buttons on remote unit
- Superior zone control with additional zone remote unit and zone multi-language OSD
- GUI on-screen display (6 languages: English, French, German, Spanish, Russian and Japanese)
- Support for a digital connection to a Blu-ray Disc and HD DVD players

## 4 Surround Realism

- 3D CINEMA DSP for creating intensive and accurate stereoscopic sound field
- Improved Compressed Music Enhancer with Straight Enhancer program
- Adaptive DRC (Dynamic Range Control) and Adaptive DSP Level

### 22 DSP Programs

#### Compatible Decoder Straight

Dolby Digital  
Dolby Digital EX  
Dolby Digital Plus  
Dolby Digital TrueHD  
DTS Digital Surround  
DTS 96/24  
DTS-ES Matrix 6.1  
DTS-ES Discrete 6.1  
DTS-HD High Resolution Audio  
DTS-HD Master Audio  
Dolby Pro Logic  
Dolby Pro Logic II Music  
Dolby Pro Logic II Movie  
Dolby Pro Logic II Game  
Dolby Pro Logic IIx Music  
Dolby Pro Logic IIx Movie  
Dolby Pro Logic IIx Game  
DTS Neo:6 Music  
DTS Neo:6 Cinema  
Neural-THX

#### HiFi DSP Programs

11

#### CLASSICAL

Hall in Munich  
Hall in Vienna  
Hall in Amsterdam  
Church in Freiburg  
Chamber

#### LIVE/CLUB

Village Vanguard  
Warehouse Loft  
Cellar Club  
The Roxy Theatre  
The Bottom Line

#### STEREO

7 Channel Stereo

#### CINEMA DSP Programs

11

#### MOVIE

Standard  
Spectacle  
Sci-Fi  
Adventure  
Drama  
Mono Movie

#### ENTERTAINMENT

Sports  
Action Game  
Roleplaying Game  
Music Video  
Recital/Opera

#### DSP Program Total

22

P10019663UC-RXV3800@NPB

## High Sound Quality

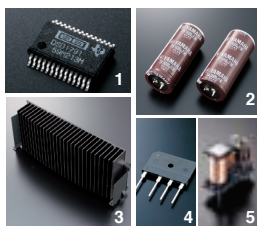
### HD Audio Format Signals Capability

This receiver lets users enjoy the best possible and newest surround sound from Blu-ray Disc players and HD-DVD players. It supports the two lossy formats: Dolby Digital Plus and DTS HD High Resolution, as well as the lossless formats: Dolby TrueHD and DTS-HD Master Audio.



### Digital ToP-ART and High Current Amplification

Yamaha's Digital ToP-ART concept combines the latest and best technologies, parts and circuit designs to maximize sound quality. An interior layout completely isolates the digital, analog and video sections and provides the shortest possible signal routes. Top quality parts include Burr-Brown 192kHz/24-bit DACs and 192kHz/24-bit ADC, a low-noise discrete power supply,

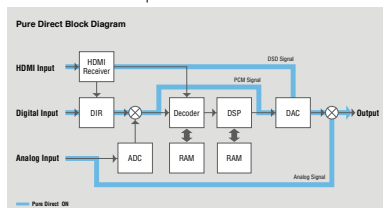


- 1 High grade Burr-Brown DAC
- 2 Custom made block capacitors (18,000µF)
- 3 Large, arch-shaped heat sink
- 4 Schottky barrier diode for high S/N
- 5 Two direct signal path speaker relays

High Current Amplification circuitry achieves high current power with low impedance for superior amplifier performance.

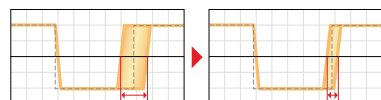
### Pure Direct for Highest Sound Quality

Pure Direct is a special receiver mode that causes the signal to bypass all but the most basic audio circuitry, and even turns off the display to prevent any chance of noise interference. It provides the purest possible high-fidelity sound from all sources including USB and HDMI inputs.



### Low Jitter PLL Circuitry

Switching the PLL loop filter (transmission coefficient) stabilizes the clock produced from the SPDIF input to reduce clock jitter, thereby improving sound quality. Lower clock jitter improves the sound orientation and sound field representation.



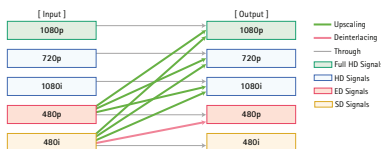
Low Jitter PLL Circuitry (before: right and after: left)

## High Picture Quality

### Full HD 1080p Video Upscaling (4 In/1 Out)

The HDMI 1.3a interface upgrades the transmission of standard, enhanced and high-definition video signals via HDMI for higher than

ever quality through a single cable. With four HDMI input terminals, users can connect a variety of high-definition sources such as a Blu-ray Disc or HD-DVD player and switch easily among them.



Using Anchor Bay Technology's proprietary 10-bit Precision Video Scaling™ engine (ABT1010), upscaling is provided to 1080p. The engine scans images both horizontally and vertically, achieving superb picture quality with all high resolution video displays. It upscales analog composite or S-Video 480i and component 480i or 480p signals to not only 1080i/720p but also to 1080p so they can be output digitally at the HDMI out for viewing on the highest quality full HD displays.

### Deep Color (30/36 Bit) Transmission

The receiver supports latest HDMI 30- and 36-bit color depths, improved from the 24-bit depth of previous versions. This "Deep Color" allows the rendering of billions of colors for far greater accuracy. Colors are so vivid they seem to jump off the screen, with perfectly smooth tonal transitions and ultra-fine gradations between colors. It also enables many times more shades of gray, for higher contrast ratio.



### 120Hz and 24Hz Refresh Rates

#### • High Refresh Rate (120Hz)

The standard refresh rate (frame rate) for video displays is 60Hz. Recently, however, LCD TVs and monitors are being introduced that use a double refresh rate (120Hz) to prevent flicker and delay problems. The RX-V3800 is capable of transmitting this high refresh rate signal via HDMI.



Video circuit board

#### • Low Refresh Rate (24Hz)

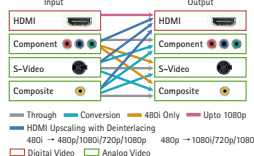
Blu-ray Discs are mastered at 24 frames per second (the same as 35mm movie film) with 1080p resolution. In order to make the most of this high quality, 1080p/24Hz compliant displays and players are being introduced. The RX-V3800 is capable of transmitting the 1080p/24Hz signal to ensure highest quality throughout the reproduction chain.

### Auto Lip-Sync Compensation

When video and audio signals are transferred via HDMI and the video shown on a display and the audio output by an AV receiver, the video delay time (time from signal input until it is seen) and the audio delay time (time from signal input until it is heard) are different, so the video and audio slip out of sync. The Auto Lip-Sync compensation function monitors the video delay time, and automatically adjusts the amount of audio delay to eliminate the difference, so you hear the dialogue just as the person is speaking.

### Analog Video to HDMI Digital Video Upconversion

This is a function that converts analog signals from composite, S-Video or component terminals to output from higher quality HDMI digital video. This ensures the highest possible picture quality from the AV receiver to a monitor or TV via a single cable. It also performs Down-Conversion among component, S-Video and composite signals.



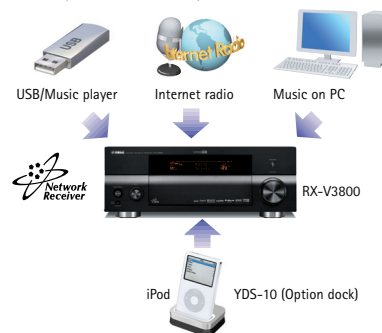
## Advanced Features

### Network Receiver

Using network connection and Windows Media Player 11, it lets you play MP3, WMA and WAV music from a remote PC. You can also listen to any of the thousands of stations available on Internet radio via LAN.

The RX-V3800 provides even more listening options. It can function as a Client in Yamaha's MusicCAST home audio network, seamlessly integrating with the MCX-2000. A USB terminal on the front panel makes it convenient to play music from USB flash drives and portable USB audio players.

\* Not compatible with certain components and music servers.



### XM Satellite Radio Ready with XM HD Surround Powered by Neural-THX Surround Decoder

This receiver is XM Satellite Radio ready, allowing you to hear over 170 digital channels of music, news, sports, talk and entertainment from America's number one Satellite Radio service. To get XM Satellite Radio the XM Mini-Tuner and Home Dock including home antenna are required (sold separately).



This receiver is also capable of receiving XM Satellite Radio with XM HD Surround powered by Neural-THX Surround Decoder which also can enjoy gaming and movies by 7.1-channel.

### YPAO Sound Optimization with Quick Start and System Memory Buttons on Remote Unit

Yamaha's YPAO Sound Optimization system analyzes the acoustics of the room and adjusts various speaker parameters to provide optimum sound quality at the listening position — in less than three minutes! A new Quick Start function displays the YPAO Auto Setup menu when the microphone jack is inserted, so Start can be immediately selected. Six YPAO settings can be memorized.



### YDS-10 Universal Dock for iPod

The optional YDS-10 Universal Dock lets you connect your iPod to the receiver. You can listen to your iPod music and watch iPod images and movies on your monitor via the receiver. You can also operate your iPod via the receiver's remote unit with the on-screen display (choice of six languages) and charge your iPod.

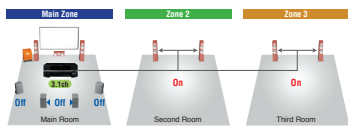
Works with: iPod nano, iPod mini and iPod (Click Wheel)



iPod not included

### Superior Custom Zone Control

Users can enjoy audio in three rooms and well as video in the second room with an extensive array of Custom Zone Control features. These include Main/Zone 2/Zone 3 power control, front panel selection of XM/FM/AM tuning, volume and input source, Zone 2 video output and on-screen menu display, and Zone 2/3 tone and L/R balance control for ceiling or wall-mounted speakers. A separate Zone Remote Unit is provided and there is also an RS-232C interface for a touch-panel controller.



For multi-room custom installations, power amp channels can be assigned in two ways: five for the Main Zone and two for Zone 2 (for 5.1 channel sound in the main room), and three for the Main Zone and two each for Zones 2 and 3 (for music in all three rooms without the need for extra amplifiers).

### On-Screen Display with GUI

An on-screen GUI (Graphical User Interface) display makes operating the receiver easy and intuitive. It is compatible with iPod, internet radio, PC and USB displays. Six display languages can be selected: English, Spanish, French, German, Russian and Japanese.



### System Memory

This receiver has a System Memory function for saving and recalling multiple system parameter settings. Four different system settings can be easily saved and then instantly recalled at any time by using the four System Memory buttons on the remote. For example, if you have a particular "sound" that you prefer with action movies, just save those parameters and then press that button whenever you watch an action movie.

### Initial Volume and Maximum Volume

Two volume setting functions are including on this receiver for additional convenience. Initial Volume Setting allows you to set the volume level that will be heard each time the power is turned on. Maximum Volume Setting prevents unexpected loud sounds, for example if a young child turns the volume knob.

### Surround Realism

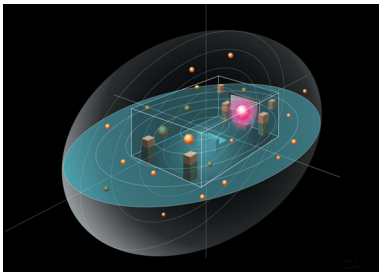
#### 3D CINEMA DSP

The RX-V3800 features surround sound processing with the enhanced capability of 3D CINEMA DSP. By using two presence speakers in addition to the four FL/FR and SL/SR speakers, the sound field is given an extra vertical dimension. Pressing the 3D DSP button provides

a sound field that expands both upward and downward. HiFi DSP programs sound more natural, closer to the feeling of actually being in a concert hall with a high ceiling or a small live house where the sound seems to bounce up from the floor. CINEMA DSP programs have an added dimension of height that was previously difficult to achieve, so sounds coming from above have precise localization. In short, the source and the sound field are in closer harmony, providing a delightful new CINEMA DSP experience.



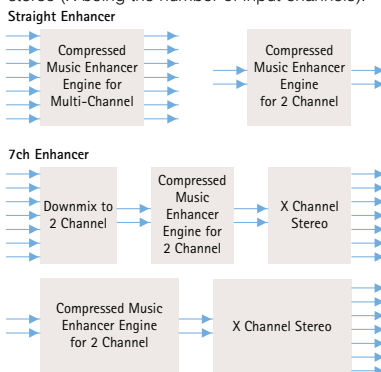
High-performance CINEMA DSP LSI (32-bit floating point quantization)



3D CINEMA DSP (with imaginary sound source distribution)

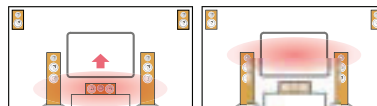
#### Improved Compressed Music Enhancer

Yamaha's Compressed Music Enhancer is a popular feature that restores the sound of the original music from digitally compressed formats such as MP3. This receiver offers an upgraded version that processes multi-channel signals with a DSP algorithm, so all channels (rather than just two) are enhanced. This provides more accurate reproduction and a more expansive sound. There are two modes: Straight Enhancer that enhances and outputs each input channel as is, and 7ch Enhancer that downmixes the input channels to 2-channel and then outputs them as X-channel stereo (X being the number of input channels).



### Dialogue Lift

When using front and center speakers that are positioned below the screen, dialogue may not be heard with maximum clarity. The Dialogue Lift function causes part of the sound from the front and center channels to be output from the presence speakers, so you hear the dialogue more clearly.



Before using Dialogue Lift Ideal dialogue position

### Adaptive DRC

Adaptive DRC (Dynamic Range Control) is a new volume control technology that is effective for low-volume listening, such as at night or with headphones. It applies DRC processing to eliminate the volume differences between loud commercials and ordinary programming and to take into account our ears' loss of sensitivity as volume decreases. The compensation is performed automatically, so all dialogue is heard clearly even at low levels, and there are no sudden loud bursts of sound.

### Adaptive DSP Level

When volume is low, CINEMA DSP effects may be difficult to hear. Adaptive DSP Level overcomes this problem by evaluating the difference between the volume level and a reference level, and adjusting the DSP level to ensure optimum effectiveness, that is, the best possible sound.

### Other Notable Features

- Surround Back terminal's amplifiers can be assignable for bi-amplification connections
- 40-station FM/AM preset and direct preset tuning / Auto preset tuning
- Linear Damping and high dynamic power
- Aluminum front panel and volume knob/input selector
- SILENT CINEMA and Virtual CINEMA DSP
- Rec Out/Zone selector
- Preout terminals for front L/R, center, surround L/R, surround back L/R and presence L/R, and subwoofer out
- 8ch or 6ch external decoder input capability
- Analog downmix
- iPod song titles displayed in English and Western European languages ISO 8859-1 (Latin1) on the front panel and on-screen display
- 9 selectable subwoofer crossover frequencies
- Subwoofer phase select
- 3 HDTV compatible component video inputs
- Sleep timer
- Detachable power cable
- Extended remote control codes, dual remote terminals for Zone 2 and Zone 3 and dual programmable +12V trigger outputs

### Main Specifications

Min. RMS Output Power (8 ohms, 20 Hz-20 kHz, 0.04% THD)	
Front Channels	140 W + 140 W
Center Channel	140 W
Surround Channels	140 W + 140 W
Surround Back Channels	140 W + 140 W
Dynamic Power/Ch (Front Ch, Speaker-1)	
8/6/4/2 ohms	170/205/265/345 W
Damping Factor	
(8 ohms, 20 Hz-20 kHz)	150
Frequency Response	10 Hz-100 kHz +0, -3 dB
Total Harmonic Distortion (20 Hz-20 kHz)	
CD (Front Sp Out)	0.04%
Signal-to-Noise Ratio (CD)	100 dB (250 mV)
Video Monitor Out Frequency Response	
Component Video Signal	5 Hz-100 MHz -3 dB
Standby Power Consumption	0.1W
Dimensions (W x H x D)	17-1/8" x 6-3/4" x 17-1/4"
	435 x 171 x 439 mm
Weight	38.4 lbs.; 17.4 kg

• The XM Satellite Radio service is only available in the 48 contiguous United States (not available in Alaska and Hawaii) and Canada. • XM name, XM Ready and related logos are registered trademarks of XM Satellite Radio, Inc. • Neural Surround is a trademark owned by Neural Audio Corporation. THX is a trademark of THX Ltd. • iPod is a trademark of Apple Computer, Inc., registered in the U.S. and other countries. • HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC. • Burr-Brown products are trademarks of Texas Instruments, Inc. • Powered by ABT™ is a trademark of Anchor Bay Technologies Inc. • Dolby and the double-D symbol are registered trademarks of Dolby Laboratories. • DTS is a registered trademark and the DTS logos, Symbols, DTS-HD and DTS-HD Master Audio are trademarks of DTS, Inc. • Product designs and specifications are subject to change without notice.

**d-cinema** "d-cinema" is the slogan of Yamaha AV products and technology, reflecting our focus on digital technology and our leadership in creating and refining digital home theater.



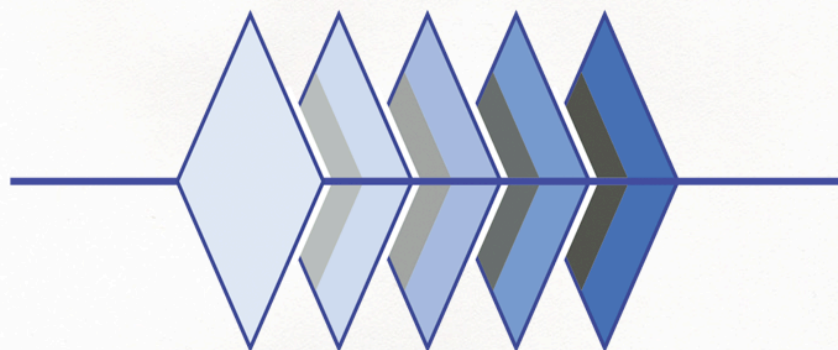


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